BEFORE THE BOARD OF OIL, GAS AND MINING

DEPARTMENT OF NATURAL RESOURCES

IN AND FOR THE STATE OF UTAH

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF MAR/REG OIL COMPANY FOR AN ORDER ESTABLISHING 160-ACRE DRILLING AND SPACING UNITS FOR HORIZONTAL WELLS IN AND THE PRODUCTION OF OIL, GAS, AND OTHER HYDROCARBONS FROM THE DESERT CREEK AND UPPER ISMAY FORMATIONS IN THE NE1/4 OF SECTION 19, TOWNSHIP 38 SOUTH, RANGE 26 EAST, S.L.M., SAN JUAN COUNTY, UTAH.

DOCKET NO. 2010-024 CAUSE NO. 188-04

TAKEN AT: Department of Natural Resources
1594 West North Temple, Room 1040
Salt Lake City, Utah

DATE: Wednesday, December 8, 2010

TIME: 9:24 a.m. to 10:29 a.m.

REPORTED BY: Michelle Mallonee, RPR

ATKINSON BAKER COURT REPORTING
JOB #A403309

APPEARANCES

BOARD OF OIL, GAS AND MINING:

Douglas E. Johnson, Chairman
Ruland J. Gill, Jr.
Jake Y. Harouny
James T. Jensen
Kelly L. Payne
Samuel C. Quigley
Jean Semborski (Excused)

DIVISION OF OIL, GAS AND MINING:

John R. Baza, Director
Dana Dean, Associate Director, Mining
John Rogers, Associate Director, Oil and Gas
Jim Springer, Public Information Officer
Steve Schneider, Administrative Policy Coordinator
Julie Ann Carter, Secretary to the Board

ASSISTANT ATTORNEYS GENERAL:

Fred Donaldson - Division Attorney
Steve Alder - Division Attorney
Emily Lewis - Division Attorney
Michael S. Johnson - Board Attorney

FOR MAR/REG Oil Company:

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I N D E X

Docket No. 2010-024 Cause No. 188-04

Wednesday, December 8, 2010

(The proceedings began at 9:24 a.m.)

CHAIRMAN JOHNSON: Okay. So now, let's go back to Agenda Item No. 3, which is Docket No. 2010-024 Cause No. 188-04 - In the Matter of the Request for Agency Action of MAR/REG Oil Company for an Order Establishing 160-Acre Drilling and Spacing Units for Horizontal Wells in and the Production of Oil, Gas, and other Hydrocarbons from the Desert Creek and Upper Ismay Formations in the NE1/4 of Section 19, Township 38 South, Range 26 East, S.L.M., San Juan County, Utah.

Mr. Clawson, you are representing the petitioner?

MR. CLAWSON: Yes. Tom Clawson on behalf of MAR/REG Oil Company.

CHAIRMAN JOHNSON: And Mr. Donaldson, you are representing the Division?

MR. DONALDSON: Yes, Mr. Chairman.

CHAIRMAN JOHNSON: Mr. Clawson, would you please proceed.

MR. CLAWSON: Thank you very much, Mr. Chairman.

Today MAR/REG is seeking 160-acre spacing for horizontal laterals into the Upper Ismay and the Desert Creek Formations in the Paradox Basin in San Juan County,

Utah. There is currently no spacing for the subject lands in this matter for vertical wells. There's only the Board's 640-acre temporary spacing rule for the horizontal wells.

This is a continuation of the September 22 hearing. During that hearing, we introduced and presented land and legal testimony and exhibits. Some of those -- well, the land and legal exhibits were admitted into the record. But the hearing was continued to allow MAR/REG to clear up some of the confusion that was raised by its geologic testimony and exhibits.

I note that a couple of the Board members here today were not present at the September 22 hearing. And on behalf of MAR/REG, we hereby waive any objection to Board members Mr. Payne and Mr. Gill participating in this proceeding and in the Board's deliberation and decision.

CHAIRMAN JOHNSON: You'll be going through the geologic and the engineering information today. Is that correct?

MR. CLAWSON: To assist the Board members that weren't present at the September 22 hearing and also to help clarify some of the ownership issues that were raised at that hearing, we'll briefly go through some of the land and legal testimony and exhibits to bring them

up to speed.

CHAIRMAN JOHNSON: Okay.

MR. GILL: Mr. Chairman, my understanding is that MAR/REG owns 75 percent of the leasehold rights in the subject lands, and that Questar Exploration & Production Company through its -- now its successor company, QEP Resources, owns a 25 percent interest in that lease. I am a former employee of that company and still have some interest with that company. Because of that, I have a potential conflict of interest. I don't know if that's a concern to anybody. But it might be best if I recuse myself from this hearing. I don't want to leave the room, and I'd really like to sit here and listen, but...

MR. CLAWSON: Mr. Chairman, we have no problem with Mr. Gill participating in the hearing.

MR. GILL: Let's just leave that as a question to the end. Can we do that? Can we leave that open to the end?

CHAIRMAN JOHNSON: Let's have Mr. Gill participate in the hearing. But he will, depending on what thing like look like, he will probably not participate in the deliberations of the Board, then.

MR. CLAWSON: That's up to the Board. So long as there's a quorum, we don't care.

CHAIRMAN JOHNSON: Yes.

And Mr. Payne, you are comfortable?

MR. PAYNE: I'm comfortable if they're comfortable.

MR. JENSEN: I would suggest on Ruland that the decision of whether you participate, let's leave it until all the evidence is in. And then let's address the question before we go into deliberation. Unless there's some real pressing reason to not have you involved in the deliberation, I would like to see you be involved in the deliberation. But let's hold that until the end of the evidence.

MR. CLAWSON: Okay. And I can -- we've already, you know, entered testimony regarding the ownership. And I can tell you -- and we will tell you again -- that QEP is in favor of this horizontal well. We're not in opposition with the QEP.

CHAIRMAN JOHNSON: Okay. So let's see how things go.

Go ahead, then, Mr. Clawson.

MR. CLAWSON: Just to kind of set this up, today's hearing is principally going to be about the technical aspects of seeking spacing for the proposed horizontal laterals. We'll deal with the geology, the reservoir engineering, and the economic analysis.

With that being said, I have one witness with me here today, Mr. Tariq Ahmad. He testified previously at the Board's hearing on September 22. And I'd note that he's still sworn in.

CHAIRMAN JOHNSON: Yes.

MR. CLAWSON: With that, I proceed with my witness.

CHAIRMAN JOHNSON: Mr. Donaldson.

MR. DONALDSON: I'm being told that Tariq was not sworn, that it was his brother.

MR. CLAWSON: Tariq was sworn at the hearing. He wasn't qualified as an expert witness.

CHAIRMAN JOHNSON: Let's just do that to be sure, then.

Mr. Ahmad, can we swear you in, please.

MR. AHMAD: Sure.

THE REPORTER: You do solemnly swear the testimony you are about to give will be the truth, the whole truth, and nothing but the truth so help you God?

MR. AHMAD: I do.

TARIQ AHMAD,

having been first duly sworn,

was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CLAWSON:

MR. CLAWSON: Would you please state your full name and address for the record.

MR. AHMAD: Tariq Ahmad. 13495 South Hills Drive, Reno, Nevada, 89511.

MR. CLAWSON: And what is your affiliation with MAR/REG?

MR. AHMAD: I'm a petroleum engineer and a vice president for MAR/REG.

MR. CLAWSON: And what are your principal responsibilities in that position?

MR. AHMAD: I do all the engineering geology and operations for MAR/REG.

MR. CLAWSON: You previously testified at the Board's September 22 hearing with respect to land and legal issues and mineral ownership. But today I'm going to ask you to testify as an expert witness regarding the geology of the reservoir engineering, volumetric calculations, and economic analysis.

In that regard, would you please provide us with a brief explanation of your education and experience?

MR. AHMAD: I graduated from the Colorado School of Mines in 1978 in petroleum engineering. And I worked as a petroleum engineer basically in reservoir engineering, giving oil and gas reserve evaluations. And as such, as a reservoir engineer, I was also trained to

do a lot of geological work, which is structural engineering and isopachs and volumetric reserves.

MR. CLAWSON: Are you certified by any professional organization?

MR. AHMAD: I'm certified with the Society of Petroleum Engineers as a Certified Petroleum Engineer, and I'm also registered as a Professional Engineer.

MR. CLAWSON: Are you familiar with the Upper Ismay and Desert Creek Formations beneath the subject lands?

MR. AHMAD: Yes, I am.

MR. CLAWSON: Have you previously testified as an expert witness before any oil and gas commissions?

MR. AHMAD: Yes, I have.

MR. CLAWSON: I'd ask that Mr. Ahmad be recognized as an expert for purposes of this hearing for geological interpretation, as well as petroleum engineering and economic analyses for the purposes of this hearing.

CHAIRMAN JOHNSON: Mr. Donaldson.

MR. DONALDSON: Before we allow that, the Division would like to know -- or would like to ask Mr. Ahmad to elaborate on his geologic training.

MR. AHMAD: Sure. As a petroleum engineer, when you have to do reservoir engineering calculations, one of

the things that I was trained in my experience over the last 30 years was to prepare isopach maps and structural maps and do cross sections and such to come up with reserves for the various projects I worked on.

MR. DONALDSON: Have you had any courses on geologic -- geologic courses and things like that?

MR. AHMAD: Sure. When you go to the Colorado School of Mines as a petroleum engineer, one of the basic courses you have to take are two years of geology.

MR. DONALDSON: The Division will allow him to be designated, then.

CHAIRMAN JOHNSON: Thank you.

Does the Board have any questions or objections to Mr. Ahmad?

Then we'll recognize him as an expert as you've requested, Mr. Clawson.

MR. CLAWSON: Thank you.

I'd refer you to Exhibit No. 1. And I'd note for the members, the Board members that weren't present at the September 22 hearing, this exhibit has already been admitted into the record.

Would you please tell us where the Squaw Canyon field is located?

CHAIRMAN JOHNSON: Mr. Clawson, can you tell us what the exhibit is that we're looking at?

MR. CLAWSON: It's Exhibit No. 1. And it is in the -- there's three sets of exhibits that have been filed. And maybe now is a good point to basically kind of explain how that works.

There were the original exhibits that were filed timely for the September 22 hearing. I think those were Exhibits 1 through 18.

CHAIRMAN JOHNSON: Okay.

MR. CLAWSON: And Exhibit No. 1 is in that original package. At the hearing, we also filed revised Exhibits 5, 6, and 7 and a new Exhibit 19. We're not going to deal with any of those exhibits.

CHAIRMAN JOHNSON: Okay.

MR. CLAWSON: And then more recently we filed revised exhibits. They were filed on November 8, and, you know -- so we're going to go through Exhibits 1, 2, 3, 4 -- 4 is going to be new -- 16 and 17. We'll go through that. We're going to go through some of the original exhibits, and then we're going to go into the new package. Don't pay any attention to the exhibits that were filed at the September 22 hearing.

So back to Exhibit No. 1.

CHAIRMAN JOHNSON: Which was filed for the September 22 hearing?

MR. CLAWSON: True. Correct.

MR. JENSEN: To refresh me and the Board, Tom, can you tell us the exhibits that were admitted in September?

MR. CLAWSON: Yes. I was going to.

They are 1 -- I have a list. It's 1, 2, 3, 18, which is the ownership interests, 16, which is the JOA, 17, which is the Request for Agency Action. Those are the ones that were admitted.

CHAIRMAN JOHNSON: Okay. Were those admitted, or were they just reviewed?

MR. CLAWSON: They were admitted. I asked that they be admitted, and they were admitted.

CHAIRMAN JOHNSON: Okay. All right.

MR. JENSEN: So again, 1, 2, 3, 16, 17, and 18?

MR. CLAWSON: Correct.

CHAIRMAN JOHNSON: Okay. Go ahead.

MR. AHMAD: The Squaw Canyon field is located approximately about 15, 16 miles southeast of Blanding, Utah, in the Four Corners area.

MR. CLAWSON: And is it indicated on Exhibit No. 1?

MR. AHMAD: Yes, it is.

MR. CLAWSON: Now I'd refer you to Exhibit No. 2, which was also admitted at the previous hearing.

Can you please tell us what this exhibit is and

what it shows?

MR. AHMAD: This exhibit shows the approximate location of the Squaw Canyon field in relation to the other fields in the general area. And also shows how these fields are all trending northwest-southeast in their location.

MR. CLAWSON: Can you tell us the nature of these fields?

MR. AHMAD: These fields are all basically algal-mounds and carbonate buildups.

MR. CLAWSON: And can you briefly tell us what an algal-mound and carbonate buildup is?

MR. AHMAD: Those are basically little reef structures which are built in shallow shelf areas. They are stratigraphic, they're not anticlines. They are just simple little mounds. And that's where the oil and gas is situated.

MR. CLAWSON: Can you please provide us with a brief history of the Squaw Canyon field and its development?

MR. AHMAD: Squaw Canyon field was discovered by MCOR Oil & Gas in 1979 by the drilling of the Federal 1-19 well. The well was drilled for the Upper Ismay; however, they completed it in the Desert Creek Formation. The well initially came in at about approximately 550

barrels of oil per day. And after that, the MCOR and some other companies also drilled some delineation wells, except there was only two wells which were placed on production.

MR. CLAWSON: Is MAR/REG the designated operator of the -- well, which wells does MAR/REG operate?

MR. AHMAD: MAR/REG operates the Federal 1-19 and the Federal 3-19 wells.

MR. CLAWSON: And does the BLM and the Division of Oil, Gas and Mining recognize MAR/REG as the designated operator of those wells?

MR. AHMAD: Yes, they do.

MR. CLAWSON: Now I'd refer you to Revised Exhibit 19. That's in the November 8 package of exhibits.

Have you examined this exhibit and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Can you please tell us what this exhibit is and what it shows?

MR. AHMAD: This exhibit gives a general history of each of the wells that was drilled in the Squaw Canyon field. And it gives you generally the dates and depths, and when those wells were drilled, and when they were plugged, and the status.

MR. CLAWSON: Is the purpose of this exhibit simply to summarize the existing wells?

MR. AHMAD: Yes, it is.

MR. CLAWSON: Could you please explain the general purpose behind today's spacing proceeding?

MR. AHMAD: What we want to do -- after we examined the Squaw Canyon field and we also read a report by the Utah Geological Survey, which was funded by the Department of Energy, wherein it stated that to develop these algal-mound fields, it would be more efficient to drill horizontal wells. And after we studied this field, we came to the conclusion that in order to efficiently drain and preserve the reserves in this area, we'd have to drill a horizontal well, both in the Desert Creek and Ismay Formations.

MR. CLAWSON: What are MAR/REG's plans for the properties within the subject lands?

MR. AHMAD: We want to keep the two existing wells on production and drill a third well with two horizontal legs.

MR. CLAWSON: Will you continue producing the vertical wells?

MR. AHMAD: Yes, we will.

MR. CLAWSON: Will you co-mingle the production from the laterals and the horizontal well?

MR. AHMAD: Yes.

MR. CLAWSON: Now, I would refer you to Exhibit No. 3, which is in the Board's first pile of exhibits and was previously entered in this proceeding.

Could you please tell us what this exhibit is and what it shows?

MR. AHMAD: This exhibit gives the land ownership in Section 19 and the surrounding areas.

MR. CLAWSON: MAR/REG's original Request for Agency Action sought to suspend the Board's temporary 640-acre spacing for horizontal wells in the entire Section 19.

The Board may remember that at the September 22 hearing, it was suggested that we limit the effect of the Request for Agency Action to just simply the northeast quarter of Section 19. And the Board entered an order removing the effect of the Request for Agency Action to all lands in Section 19, except the northeast quarter. Just to clarify. Everyone --

MR. JENSEN: That's correct.

MR. CLAWSON: -- knows the only lands we're dealing with now, the subject lands, are simply the northeast quarter of Section 19.

CHAIRMAN JOHNSON: Okay.

MR. CLAWSON: Could you please tell us who owns

the minerals in the subject land?

MR. AHMAD: The minerals are owned by the United States government.

MR. CLAWSON: And are the subject lands leased?

MR. AHMAD: Yes.

MR. CLAWSON: What's the -- is it a federal lease?

MR. AHMAD: It's Federal Lease U-40401.

MR. CLAWSON: And does that lease also cover the southwest quarter?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Now I refer to Exhibit No. 18, which was part of the original submission and has already been previously entered in the record.

What is this exhibit and what does it show?

MR. GILL: Hang on. Let us get there, please.

MR. CLAWSON: It's in the original --

MR. JENSEN: Actually, I don't think it is. Did you add it at the September hearing? It doesn't even show it on the list of exhibits.

MR. PAYNE: There's an Exhibit 18 filed on September 8. Is that it?

MR. JENSEN: Okay.

CHAIRMAN JOHNSON: Looks like we're almost there.

MR. JENSEN: Got it. Thanks, Kelly.

CHAIRMAN JOHNSON: Go ahead.

MR. CLAWSON: Thank you.

Could you please tell us what this exhibit is and what it shows?

MR. AHMAD: This exhibit shows the ownership interests in Section 19.

MR. CLAWSON: And it shows the ownership interests throughout the entire section?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Could you please tell us what the ownership is within the northeast quarter of Section 19?

MR. AHMAD: Northeast quarter, QEP Energy owns 25 percent, and Nathan Oil, LLC, owns 75 percent.

MR. CLAWSON: Is there a stratigraphic -- well, first of all, does Nathan Oil own 75 percent?

MR. AHMAD: Yes.

MR. CLAWSON: And how are Nathan Oil and MAR/REG related?

MR. AHMAD: They are inter-related companies.

MR. CLAWSON: Is there a stratigraphic limitation on the ownership in the northeast quarter?

MR. AHMAD: Yes, there is. The ownership is 100 feet below the stratigraphic equivalent of the well, the Federal 1-19 drilled in that section.

MR. CLAWSON: We'll come back to that in a minute.

And you testified that QEP Energy Company owns the other 25 percent?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Now I refer you and the Board to a letter that was filed with the Board. It's not part of our hearing exhibits, but it's a letter from Rhonda Ahmad of -- I'm sorry. It's from Tariq, addressed to MAR/REG Company. And it was filed on October 14, 2010.

Can you please tell us what this -- well, have you examined this letter and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Can you please tell us what this is?

MR. AHMAD: It's a letter from Nathan Oil to MAR/REG supporting this spacing order request.

MR. CLAWSON: Does QEP also support MAR/REG's request in spacing?

MR. AHMAD: Yes, it does.

MR. CLAWSON: And how do you know?

MR. AHMAD: I've talked to QEP's land department and gave them all the documentation. And they called me back and they said they support this.

MR. CLAWSON: Now, I'd refer you to Exhibit

No. 16, which has already been admitted to the record.

You need to -- The Board can't hear you. You need to sit closer to the mic.

MR. AHMAD: Yes.

MR. CLAWSON: Now I'd refer you to Exhibit 16, which was previously admitted.

Is there a voluntary pooling agreement covering the subject lands and the subject lease?

MR. AHMAD: Yes, there is.

MR. CLAWSON: And is that Exhibit 16?

MR. AHMAD: Yes, it is.

MR. CLAWSON: Okay. Now I'd refer you to Exhibit No. 21, which has not previously been admitted. It's part of the November 8 packet.

MR. AHMAD: Okay.

MR. CLAWSON: Does the Board --

MR. JENSEN: What was that again, Tom?

MR. CLAWSON: It's Exhibit No. 21, which is part of the packet that was filed on November 8th.

MR. JENSEN: Got it.

MR. CLAWSON: Have you examined the exhibit and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Could you please tell us what this exhibit is?

MR. AHMAD: This is an exhibit to the Joint Operating Agreement that's in force for this lease.

MR. CLAWSON: And that would be Exhibit 16?

MR. AHMAD: Yes.

MR. CLAWSON: Is there a stratigraphic limitation established under the JOA?

MR. AHMAD: Yes, there is.

MR. CLAWSON: Can you please tell us what that is.

MR. AHMAD: It states on Exhibit A, paragraph 1 that, "The oil and gas leasehold interests and the lands subject to this agreement are set forth on Exhibit 'A-1' attached hereto ... from the surface of said lands down to the stratigraphic equivalent of 100 feet below the total depth drilled," which is 5612 feet, "in the Federal 1-19 well."

MR. CLAWSON: And this agreement covers the subject lands?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Are the spaced intervals, as described in the Request for Agency Action, above the stratigraphic limitation created by this JOA and above the lower boundary of the ownership interests in the northeast quarter of Section 16?

MR. AHMAD: Yes, they are.

MR. CLAWSON: Who owns the surface of the subject lands?

MR. AHMAD: The federal government.

MR. CLAWSON: Are they administered by the BLM?

MR. AHMAD: Yes, they are.

MR. CLAWSON: And does the BLM administer the federal minerals, as well?

MR. AHMAD: Yes, they do.

MR. CLAWSON: Now I refer you to Exhibit 17, which was previously admitted at the September hearing.

Is this the Request for Agency Action that's been filed in this cause?

MR. AHMAD: Yes.

MR. CLAWSON: Towards the back of the Request, there's a list of names and addresses.

Are these the owners, operators, and surface owners in the subject lands and in the remaining portions of Subject Section 19?

MR. AHMAD: Yes.

MR. CLAWSON: And was the Request mailed to everyone on the list?

MR. AHMAD: Yes, it was.

MR. CLAWSON: Now I'm going to refer you to Exhibit No. 4, which was not admitted at the September hearing and which is in the original packet of exhibits

that were filed.

Actually, at this point we're headed into the geology and the engineering.

CHAIRMAN JOHNSON: Okay. I think we're ready.

MR. CLAWSON: Have you examined this exhibit, and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Could you please tell us what this exhibit is?

MR. AHMAD: It just basically gives you the geological setting and how the formations look in this area.

MR. CLAWSON: Is this a stratigraphic column?

MR. AHMAD: Yes.

MR. CLAWSON: And where do the subject intervals sit with respect to the stratigraphy in the area?

MR. AHMAD: They're within the Pennsylvanian of the Hermosa Group and the Paradox Formation. You can see that right there in the Upper Ismay and the Desert Creek.

MR. CLAWSON: What were the depositional environments for the Upper Ismay and Desert Creek Formations and the related features beneath the subject lands?

What were the depositional environments for the Upper Ismay and the Desert Creek?

MR. AHMAD: These were shallow shelf environment.

MR. CLAWSON: Are they carbonate features?

MR. AHMAD: Yes, they are.

MR. CLAWSON: And what acts as the seal -- and the carbonate features represent the reservoir rock?

MR. AHMAD: Yes, they do.

MR. CLAWSON: And what acts as the seal for the reservoir?

MR. AHMAD: There's some salt formations above and some shale formations --

MR. JENSEN: Could you ask him to speak -- I couldn't hear what --

MR. AHMAD: There's some salt formations above that, that act as a seal, and also some shale.

MR. CLAWSON: Are the spaced intervals beneath the subject lands these types of stratigraphic features?

MR. AHMAD: Yes, they are.

MR. CLAWSON: And what are the various parameters of the spaced intervals?

MR. AHMAD: Oh, these spaced intervals are basic, approximately -- the Desert Creek is about 5550 feet, while the Ismay is about 5300 feet from the surface. I'm referring in this case to all the depths in the Federal 1-19 well.

The porosity in the Desert Creek is about 21 percent, while the Upper Ismay is around 13 1/2 percent. The water saturation in both formations, around 35 percent. Pretty low permeability, about one millidarcy.

The other important parameters are the zones are about 12 feet thick in the Desert Creek and about 25 feet in the Ismay. The gravity for the Desert Creek is 42. And it's a little higher in the Upper Ismay; it's about 43.2 degrees API.

And the formations, both Desert Creek and the Ismay, underlie most of the northeast quarter of Section 19.

MR. CLAWSON: Okay. Now, I'm going to refer you to Exhibit No. 20, which would be in the package of materials that were filed on November 8.

MR. AHMAD: Okay.

MR. CLAWSON: Have you examined this exhibit and are you familiar with its contents?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Can you please tell us what this exhibit is?

MR. AHMAD: This is the final report that was written by the Utah Geological Survey in reference to shallow shelf carbonate buildups in the Paradox Basin.

MR. CLAWSON: Can you use this report to further discuss the nature of an algal-mound and a carbonate build-up, please.

MR. AHMAD: Yes. It describes, as you go through the report, it kind of describes what these algal-mounds basically look like and how -- if you look at on Exhibit 20-3, there's a couple of photographs of what these algal-mounds look like. They just, if you go off to the side, they just kind of basically disappear. And it is a visualization of what the formation looks like when you drill through it.

MR. CLAWSON: Is the photo on Exhibit -- the fourth page of Exhibit No. 20 an example of an Ismay algal-mound?

MR. AHMAD: Yes, it is. If you look at it, it's pretty -- gives -- it's a photograph that we can look at and come up with exactly what one of these algal-mounds looks like about 5000 below where we are trying to drill. So it gives you a pretty good idea of what we are looking at.

MR. CLAWSON: Are they limited laterally in their scope?

MR. AHMAD: Yes, they are.

MR. CLAWSON: Okay. Now, I refer you to Revised Exhibit 10. And that would be in the package of

materials that were filed on November 8.

And I think past this point, we're only going to be dealing with materials out of that stack. Have you found them?

CHAIRMAN JOHNSON: Yes.

MR. CLAWSON: Okay.

Are you familiar with this exhibit?

MR. AHMAD: Yes, I am.

MR. CLAWSON: Can you tell us what it is?

MR. AHMAD: It says, "Structure Map of the Upper Ismay Carbonate," and gives you basically what the structure looks like for the Upper Ismay.

MR. CLAWSON: And how was it generated?

MR. AHMAD: I used well logs to generate this.

MR. CLAWSON: What type of well logs?

MR. AHMAD: Porosity logs.

MR. CLAWSON: Could you please tell us what this exhibit is -- I mean what this exhibit shows.

MR. AHMAD: It shows the general trend and extent of the Upper Ismay.

MR. CLAWSON: And the Upper Ismay is an algal-mound?

MR. AHMAD: Yes, it is.

MR. CLAWSON: And can you please tell us why this exhibit is important?

MR. AHMAD: It shows the extent, for example, on where -- in the northeast quarter section that we are asking for the horizontal well -- that the structure lies within that quarter section.

MR. CLAWSON: Is the proposed location of the horizontal well indicated on this map?

MR. AHMAD: Yes, it is. If you look on the map itself, it's a little circle there with "LOC" on it.

MR. CLAWSON: Okay. Now I'd refer you to Revised Exhibit No. 11.

Have you examined this exhibit and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Can you please tell us what it is and what it shows?

MR. AHMAD: It also is an exhibit, shows the isopach, or the thickness of the producing reservoir underlying this section.

MR. CLAWSON: Can you please tell us what an "isopach" is?

MR. AHMAD: "Isopach" is the thickness of the reservoir itself. In this case, it's everything greater than five percent porosity.

MR. CLAWSON: And what is the source of the information for the map?

MR. AHMAD: The well logs from all the wells in this area.

MR. CLAWSON: Does the map show a trace of a cross section?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Can you please tell us what that is?

MR. AHMAD: It's A-A prime, which goes from the south to the north in this section.

MR. CLAWSON: Is the Desert -- is the Desert -- well, first of all, why is this exhibit -- Revised Exhibit 11 important?

MR. AHMAD: It's important in that it shows that the reservoir itself underlies the northeast quarter of Section 19.

MR. CLAWSON: Is the Desert Creek feature beneath the subject lands an algal-mound like the Upper Ismay feature?

MR. AHMAD: You know, I'm not really not too sure about that. Because the Desert Creek, when we tried to build a structure map for that, it didn't come out the same as -- how simple it was for the Upper Ismay. It could be, but I'm not exactly sure whether it is or not.

MR. CLAWSON: Could it be a carbonate buildup, like indicated in Exhibit 20?

MR. AHMAD: Yes, it is a carbonate buildup.

MR. CLAWSON: Now I refer you to Revised Exhibit 13.

Could you please -- have you examined this exhibit, and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Could you please tell us what this exhibit is and why it's important?

MR. AHMAD: It's also an isopach, which is the thickness of the reservoir rock within this section.

MR. CLAWSON: And does it show the lateral extent of the Desert Creek feature beneath the subject lands?

MR. AHMAD: Yes, it does.

MR. CLAWSON: Now I would refer you to Revised Exhibit 14.

Could you please tell us -- first of all, have you examined this exhibit and are you familiar with it?

MR. AHMAD: Yes, I have.

MR. CLAWSON: And could you please tell us what this exhibit is?

MR. AHMAD: It's a cross section of the Upper Ismay.

MR. CLAWSON: Why is it important?

MR. AHMAD: This cross section shows the extent

of the reservoir rock within this area.

MR. CLAWSON: And does it go from south on the left to north on the right?

MR. AHMAD: Yes.

MR. CLAWSON: How did you generate this cross section?

MR. AHMAD: This cross section was generated using well logs from the wells, which are on this map itself.

MR. CLAWSON: On the previously structure and isopach maps?

MR. AHMAD: Yes.

MR. CLAWSON: Now I'd refer you to revised Exhibit 15.

Have you examined it and are you familiar with this exhibit?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Can you please tell us what this exhibit is and why it's important?

MR. AHMAD: It's also a cross section generated by well logs on the Desert Creek Formation, going from the south to the north on the map.

MR. CLAWSON: And why is it important?

MR. AHMAD: This also gives you the extent of the reservoir rock beneath the area.

MR. CLAWSON: For the Desert Creek feature?

MR. AHMAD: Yes.

MR. CLAWSON: What is the nature of the reservoirs providing the production from the existing wells?

MR. AHMAD: They're all producing from the fractures.

MR. CLAWSON: In your expert opinion, did the Upper Ismay and Desert Creek spaced intervals, as described in the Request for Agency Action, constitute pools; or in other words, are they common in accumulations of hydrocarbons?

MR. AHMAD: Yes.

MR. CLAWSON: Are the pools acceptable to development by horizontal drilling methods as proposed by MAR/REG?

MR. AHMAD: Yes.

MR. CLAWSON: Are the pools in the Upper Ismay and Desert Creek spaced intervals separate and distinct pools?

MR. AHMAD: Yes.

MR. CLAWSON: And how do you know that?

MR. AHMAD: From well logs.

CHAIRMAN JOHNSON: Mr. Clawson, can Mr. Gill ask one question on Exhibit 15 here?

MR. CLAWSON: Sure.

MR. GILL: I have a question on the left two logs. Just clarification. Let's start with the left log on Exhibit 15.

What's the producing zone there, and how wide is that? It looks like it's about the -- it's the Desert Creek Pay up to the Desert Creek, as is indicated on the left side of that log? Is that correct?

MR. CLAWSON: Well -- can you say that again?

MR. GILL: If you look at that exhibit, there's writing on the very left. It says "Desert Creek" at -- and then down to the "Desert Creek Pay." Is that the producing zone?

MR. AHMAD: The Desert Creek Pay is, is a producing zone.

MR. GILL: What I can't track is where that goes to the next one. So where is it on the -- it's on the second log from the left.

How wide is that producing zone?

MR. AHMAD: Oh, okay. In the 1-19?

MR. GILL: Yes. On the 1-19, I lose the lines.

MR. AHMAD: Okay. Maybe I can bring this up there.

MR. GILL: Yes.

(The witnessed approached the Board.)

MR. GILL: I see. That makes it a lot easier.

(A discussion was held between the Board off the record.)

CHAIRMAN JOHNSON: Mr. Clawson, do you intend to enter these larger drawings of the --

MR. CLAWSON: We can and we will.

MR. GILL: What's the indicator on the log that you are using? Is it -- it doesn't show, does it, the -- what kind of log is it?

MR. AHMAD: It's a porosity log.

MR. GILL: So you are using the porosity as the --

MR. AHMAD: For the pay zone itself.

MR. GILL: Okay.

MR. AHMAD: In the Desert Creek, the production, when they drill their well -- on the resistivity log, when you looked at it, showed -- it indicated it was all wet. But wherever they had porosity, it ended up making oil with absolutely no water. So it was kind of an anomaly.

MR. GILL: On the Federal 1-18, which is the furthest right -- I can give you back your exhibit if you need it -- but it is the furthest right log. It shows some high porosity down in the lower part of that log. But you don't have that marked on the exhibit we're

looking at. Is that also productive?

MR. CLAWSON: In the Federal 1-18?

MR. GILL: 1-18.

MR. AHMAD: No, it wasn't.

MR. GILL: Okay.

CHAIRMAN JOHNSON: Go ahead.

MR. CLAWSON: I'm betting those aren't marked as exhibits.

CHAIRMAN JOHNSON: Yes, they are. Exhibit 15 and Exhibit 14.

MR. CLAWSON: Revised?

CHAIRMAN JOHNSON: Not revised.

MR. CLAWSON: Okay. If you'll just write "Revised" on those, then I think that will be okay.

CHAIRMAN JOHNSON: Okay.

MR. CLAWSON: They are the large exhibits, and I don't think there's any -- we didn't introduce any large exhibits in the previous hearing, so.

You know, the Board was having a discussion as I went through a series of questions that are really important for the record -- I wonder if I should go back -- that these spaced intervals are pools susceptible to horizontal drilling and that they are separate.

CHAIRMAN JOHNSON: If you think it's an important point, go ahead and go through it again.

MR. CLAWSON: I think it's important enough that we should.

CHAIRMAN JOHNSON: Go ahead.

MR. CLAWSON: I beg the Board's patience.

In your opinion, are the Upper Ismay and Desert Creek spaced intervals, as they are described in the Request for Agency Action, pools, or are they -- in other words, common accumulations of hydrocarbons?

MR. AHMAD: Yes, they are.

MR. CLAWSON: Are the pools susceptible to development by horizontal drilling methods as proposed by MAR/REG?

MR. AHMAD: Yes.

MR. CLAWSON: And are the pools in the Upper Ismay and Desert Creek spaced intervals separate and distinct pools?

MR. AHMAD: Yes, they are.

MR. CLAWSON: And how do you know that?

MR. AHMAD: From well logs.

MR. CLAWSON: Is 160-acre spacing appropriate for horizontal wells drilled in both of these formations?

MR. AHMAD: Yes.

MR. CLAWSON: Based on MAR/REG's request, will there be restrictions on where the proposed horizontal laterals can be located?

MR. AHMAD: Yes. The laterals are no closer than 1320 feet from other wells, with the exception of the existing vertical wells, and no closer than 660 feet from the outer boundary of the drilling unit.

MR. CLAWSON: And we've already indicated on a map where the surface location of the new well will be. But can you give the footage?

MR. AHMAD: Yes. It will be located 660 feet from the east line, and 1980 feet from the north line.

MR. CLAWSON: Have you prepared a volumetric analysis for the laterals for the proposed well in the spaced intervals beneath the subject lands?

MR. AHMAD: Yes.

MR. CLAWSON: I'd refer you to Revised Exhibit No. 5.

Can you please -- well, have you examined this exhibit and are you familiar with it?

MR. AHMAD: Yes.

MR. CLAWSON: And can you please tell us what this exhibit is and why it's important?

MR. AHMAD: This exhibit gives the reservoir properties that were used to calculate the oil-in-place for both the Desert Creek and the Upper Ismay.

MR. CLAWSON: Were these the parameters that were used for the volumetric calculations for the

reserves in the Upper Ismay and Desert Creek?

MR. AHMAD: Yes.

MR. CLAWSON: Are the proposed spaced intervals fractured?

MR. AHMAD: Yes, they are.

MR. CLAWSON: What's the orientation of the fractures?

MR. AHMAD: I believe that the orientation is northeast-southwest.

MR. CLAWSON: And are the laterals designed to intersect those fractures?

MR. AHMAD: Yes.

MR. CLAWSON: Now I refer you to Revised Exhibit No. 6.

Are you familiar with and have you examined this exhibit?

MR. AHMAD: Yes, I have.

MR. CLAWSON: And what is this exhibit, and why is it important?

MR. AHMAD: This exhibit gives the volumetric calculations for the Upper Ismay and the Desert Creek Formations.

MR. CLAWSON: Can you please briefly tell us how you made that calculation?

MR. AHMAD: This calculation was made by, for

the Upper Ismay, using 25 feet as the thickness, porosity of 14.1 percent, water saturation of 40 percent, and the Boi of 1.45. The initial reservoir pressure was 2335 psi.

And for the Desert Creek, a thickness of 12 feet, porosity of 21 1/2, and water saturation of 45 percent. And it showed a reservoir pressure of 2368, and 160-acre drainage.

MR. CLAWSON: What's the volume of the oil-in-place for each spaced interval?

MR. AHMAD: For the Ismay, we had 1.8 million barrels. And for the Desert Creek, we had approximately 1 million barrels.

MR. CLAWSON: And so what are the total expected reserves?

MR. AHMAD: Total oil-in-place was 2.9 million barrels. The cumulative production from the two existing wells is about 349,000 barrels. The total recovery to date is about 12 percent. I used a 25 percent recovery factor for the recovery, giving us remaining reserves of about 377,000 barrels.

MR. CLAWSON: Now, I'd refer you to Revised Exhibits 8 and 9.

Have you examined these exhibits, and are you familiar with them?

MR. AHMAD: Yes, I have.

MR. CLAWSON: What are these exhibits and why are they important?

MR. AHMAD: Eight and 9 are the decline curves and the production history for both the Federal 1-19 and the 3-19 wells.

MR. CLAWSON: And did you use these to calculate the expected economic performance from the well?

MR. AHMAD: I used these two exhibits to come up with the remaining reserves on the 1-19 and 3-19. And then using that, I backed into how much we would recover from the horizontal well.

MR. CLAWSON: Will the vertical wells recover all of the remaining reserves?

MR. AHMAD: No, they will not.

MR. CLAWSON: So are the horizontal laterals warranted in that regard?

MR. AHMAD: Yes, it is.

MR. CLAWSON: Have you performed an economic analysis for the proposed horizontal laterals?

MR. AHMAD: Yes, I have.

MR. CLAWSON: Now I refer you to Revised Exhibit No. 7. Have you examined --

MR. GILL: Before you leave 8, may I ask a question?

CHAIRMAN JOHNSON: Go ahead.

MR. GILL: You've got a big jump in water production from about -- what is that? A line is marked with Xs and you've got a big jump in water production in there.

MR. AHMAD: Which well?

MR. GILL: Is there an explanation for that? We're on Exhibit 8, Revised Exhibit 8, and --

MR. AHMAD: What happened here is in the Federal 1-19, it was recompleted in the Upper Ismay from the Desert Creek. And then there are two holes in the casing, and that caused the water production to go up.

And those holes were squeezed off a couple of times. And every time they squeeze it off, it came back on production. The water production dropped. But then it would, as soon as that cement job wasn't good, the water would come back in.

MR. GILL: And is that water production salt water?

MR. AHMAD: Yes.

MR. GILL: Is there any fresh water?

MR. AHMAD: No. No. It's salt water.

MR. GILL: Thank you.

MR. CLAWSON: So referring back to Revised Exhibit No. 7, have you examined this exhibit and are you

familiar with it?

MR. AHMAD: Yes, I am.

MR. CLAWSON: What is this exhibit? What does it show, and why is it important?

MR. AHMAD: This exhibit shows the economic analysis of drilling the horizontal well.

MR. CLAWSON: Can you please briefly describe the method that you used to conduct that economic analysis?

MR. AHMAD: Well, I used a -- generated a type curve to project what the production would be in the future for drilling a horizontal well. I used operating expenses of about $2300 a month, oil price of $61, and gas price of $3, and came up with the remaining reserves of about 250,000 barrels for the horizontal well. This exhibit gives you future discounted cash flow of about $6.3 million, and $12 million undiscounted.

MR. CLAWSON: So is the pool in the Upper Ismay Formation and the pool in the Desert Creek Formation, are they economically attractive targets, based on the proposed 160-acre spacing for a horizontal lateral in each spaced interval?

MR. AHMAD: Yes, they are. We used a well cost of about $2.8 million. Our return investment would be about 4.2 to 1 undiscounted, and 2.2 to 1 discounted at

ten percent.

MR. CLAWSON: In your expert opinion, based on the engineering and geologic information we reviewed this morning, what is the maximum area that can be efficiently and economically drained by a horizontal well completed in the proposed space intervals and the Upper Ismay and Desert Creek Formations?

MR. AHMAD: Approximately 160 acres.

MR. CLAWSON: In your opinion will, 160-acre spacing in the subject lands for both spaced intervals foster, encourage, and promote the development, production, and utilization of the oil and gas resources of the state?

MR. AHMAD: Yes, it would.

MR. CLAWSON: Will it prevent waste?

MR. AHMAD: Yes.

MR. CLAWSON: Will it provide for the greater ultimate recovery of oil and gas?

MR. AHMAD: Yes.

MR. CLAWSON: Will it protect correlative rights?

MR. AHMAD: Yes.

MR. CLAWSON: Sort of bookkeeping here. We've already entered Exhibits 1, 2, 3, 16, 17, and 18 in the record at the September 22 hearing.

Now, I'll refer you to Exhibits 4, 20, and 21, and Revised Exhibits 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 19.

Are these exhibits business records in MAR/REG's files, or were they prepared by MAR/REG in connection with this proceeding or in the regular course of its business activities?

MR. AHMAD: Yes, they are.

MR. CLAWSON: I'd now ask that Exhibits 4, 20, 21, Revised Exhibits 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 19 be admitted to the record.

CHAIRMAN JOHNSON: Mr. Donaldson?

MR. DONALDSON: No objections.

CHAIRMAN JOHNSON: Does the Board have any objections?

Then those are admitted as you've requested.

MR. CLAWSON: Thank you. That's the end of my questions for my witness.

CHAIRMAN JOHNSON: Mr. Donaldson, do you have questions?

MR. DONALDSON: Our staff members do have some questions for this witness.

CHAIRMAN JOHNSON: Okay.

CROSS-EXAMINATION

BY MR. DWORSHAK:

MR. DWORSHAK: Clint Dworshak, compliance manager for the Oil and Gas.

I do have one question, and I'll refer to Revised Exhibit 13. That is the isopach for the Desert Creek. On there is the horizontal leg. However, since there's two laterals, will the lateral for the Ismay section be the same orientation?

MR. AHMAD: Approximately. They'll both be going northwest.

MR. DWORSHAK: Southeast-northwest?

MR. AHMAD: Yes.

MR. DWORSHAK: So it will pretty much trend the same as what's shown on the Desert Creek?

MR. AHMAD: Yes.

MR. DWORSHAK: Thank you.

CROSS-EXAMINATION

BY MR. DOUCET:

MR. DOUCET: Dustin Doucet, petroleum engineer for the Division. I've got a couple questions starting on Revised Exhibit 6. I know you've got noted on there for your volumetric parameters where you got some of the information.

Where did you get most of that information, like the thickness, porosity, stuff like that?

MR. AHMAD: A lot of that was taken off cores,

as well as well logs.

MR. DOUCET: Okay. And those are well logs in the area, or are the wells in the subject lands? Or what well logs or what cores?

MR. AHMAD: The well logs for the wells in the field itself.

MR. DOUCET: In the field, okay.

Also down closer to the bottom of Exhibit 6, you've got a write-up that mentions that the horizontal well with the two -- I'm assuming that's the two horizontals -- will recover 248,000 barrels. Does that include both horizontal legs?

MR. AHMAD: Yes.

MR. DOUCET: Okay. So that's 248,000 there. And then on your economics on Exhibit 6, you've got --

CHAIRMAN JOHNSON: Seven?

MR. DOUCET: Seven, yeah. Sorry.

You've got that -- that would match out. That's the same, as well. 248,000 would be for both. That's accounting for both legs, right?

MR. AHMAD: Yes, it does.

MR. DOUCET: So the economics are for both?

MR. AHMAD: Yes.

MR. DOUCET: Okay. I think that's the only questions I have.

MR. DONALDSON: The Division has no more questions.

CHAIRMAN JOHNSON: Okay. The Board.

Mr. Gill?

MR. GILL: Yes. This is a question for the staff.

In your September 18 -- or pardon me -- September 13 memo to the Board, you mentioned that there was some information that was marginal in the exhibits.

Have the revised exhibits solved those to your satisfaction?

MR. HILL: This is Brad Hill for the Division. I believe they have satisfied that.

CHAIRMAN JOHNSON: Mr. Harouny.

CROSS-EXAMINATION

BY MR. HAROUNY:

MR. HAROUNY: Mr. Ahmad, good to see you again. I have some questions for you.

The two horizontal legs, how are they situated and how are they completed?

MR. AHMAD: How will they be situated?

MR. HAROUNY: Umm-hmm.

MR. CLAWSON: We'll drill the Desert Creek horizontal first and then put a -- go up and put a bridge plug. And then drill with a whipstock and drill a

lateral.

MR. HAROUNY: How are they going to be completed?

MR. AHMAD: They're going to be open hole with a liner inside, slotted liner.

MR. HAROUNY: Are you planning on hydraulically fracturing either one?

MR. AHMAD: No. But we will acidize them.

MR. HAROUNY: So these are not going to be fractured to effectively --

MR. AHMAD: No.

MR. HAROUNY: -- cause any damage to the seal or anything?

MR. AHMAD: No, they will not be fractured.

MR. HAROUNY: Do you have any -- obviously, you are counting on fractures and fracture orientation to support your horizontal section.

Do you have any idea what the fracture orientation is in this quarter-quarter?

MR. AHMAD: Yeah, I think we said that earlier. There were -- the northeast-southwest were the -- how we believe the fractures are oriented. If we drill a northwest lateral, we should intersect them.

MR. HAROUNY: How did you determine the northeast-southwest orientation of the fractures?

MR. AHMAD: I figured that if the structure itself is oriented northwest-southeast, the stresses would be on the top, and the stress level would fracture them perpendicular to what the orientation of the structure is itself.

MR. HAROUNY: So your assessment as to this -- these fractures are all stress related and not load or tension or anything?

MR. AHMAD: Yes, I think so. And also we had -- we operate the Tin Cup field, which is about three miles west of this field. And there we have a lot of pressure data and pressure buildup from there, which is similar to this. And we determined from the pressure data and the interference testing how the fractures are oriented.

MR. HAROUNY: So if the reservoir is fractured and the orientation is northeast to southwest on the fractures, have you determined the effect of all these fractures on the water saturation calculations?

MR. AHMAD: Well, the basic -- what you assume is that your fractures would be filled with oil with your residual water saturation. But your matrix is how you determine your water saturations. But unless -- from the cores that we received, they came up with about 40 percent water saturation in them. So I guess when we finally drill, we'll find out what the real answer is. I

mean right now, we are just, you know, estimating what the numbers are.

MR. HAROUNY: Have you done any current analysis on the reservoir pressure, any P over C data?

MR. AHMAD: You can't do P over C data on oil wells. You can only do that on gas wells.

MR. HAROUNY: This doesn't have any gas at all?

MR. AHMAD: No.

MR. HAROUNY: But in the economics, you've got --

MR. AHMAD: There's some solution gas, but it's not a natural gas reservoir.

MR. HAROUNY: The last question I have for you, Mr. Ahmad, is: On your structure and isopach exhibits -- I believe there's six, specifically Exhibit No. 10 and 11 revised. Both are revised exhibits -- you have somewhat of an anomaly, if you will, regarding Well No. 20-1. Now, where you don't have that well included in your structure map and bypassed it, but yet it does have a good enough isopach, would you tell the Board what the reason for that is?

MR. AHMAD: Well, if you can look at those photographs of what an algal-mound looks like, they just happen to drop off at the edges, but you might have a little bit of thickness on the formation itself.

But if you look at the map itself on the structure map, I mean, I could have made another contour going down at 380 feet, and you'd see that contour. If you look at it, it will be way off to the bottom. Like the 10-19 is minus 380 feet, and the 20-1 is minus 389. So if you look at those photographs, they'll just come off on the side and drop off, but they might have some thickness there.

MR. HAROUNY: So the representation of zero is not probably -- on the isopach -- not an accurate assessment at this point?

MR. AHMAD: On the 20-1?

MR. HAROUNY: On the whole entire isopach that you have, Exhibit 11, Revised Exhibit No. 11. You have a zero line. That zero line may be two feet, it may be one.

MR. AHMAD: I mean, that's just an educated guess. I mean, it could be, like, way down south.

MR. HAROUNY: So there may be some?

MR. AHMAD: Right.

MR. HAROUNY: I don't have any other questions.

CHAIRMAN JOHNSON: Other questions from the Board? No?

Mr. Clawson.

MR. CLAWSON: Well, that concludes our

presentation here today. I would just ask that the Board, in consideration of the September 22 hearing and today's hearing, that the Board would approve 160-acre spacing for a horizontal well in the subject lands, the northeast quarter of Subject Section 19 as requested.

CHAIRMAN JOHNSON: Okay. Thank you, Mr. Clawson.

Is there anyone else present who would like to address the Board regarding this matter?

I'm sorry. Mr. Donaldson, would you like to address this? Sorry about that.

MR. DONALDSON: Yes. In light of the testimony and exhibits that have been presented to the Board and to the Division, the Division has no objection to the proposed spacing as offered.

CHAIRMAN JOHNSON: Okay. Thank you.

I don't see anyone else coming forward, so we're going to take a break and deliberate on this matter.

When we return with a decision, we'd like to move into Agenda Item No. 8, which is the Westwater Farms matter. So if the parties for that matter can be ready to go when we return.

Thank you very much. We'll go off the record now.

MR. JENSEN: Hold on just a minute.

CHAIRMAN JOHNSON: Let's go back on the record.

Mr. Jensen.

MR. JENSEN: I move that the request of Mr. Clawson and his client be approved, and that Mr. Clawson be asked to prepare an appropriate Order and review it with the Division and with our counsel and get it ready for signature.

CHAIRMAN JOHNSON: Is there a second?

MR. QUIGLEY: I'll second that motion.

MR. GILL: Mr. Chairman, I'd like to let the record show that I will exercise my request to be recused from this matter.

CHAIRMAN JOHNSON: Okay.

MR. GILL: I did not vote on that motion.

CHAIRMAN JOHNSON: Okay.

Any other discussion on the motion? Okay.

All those in favor of approving the request, say "Aye."

MR. PAYNE, MR. QUIGLEY, CHAIRMAN JOHNSON,

MR. HAROUNY, MR. JENSEN: Aye.

CHAIRMAN JOHNSON: Is there anyone opposed?

So let the record show that vote was five in favor and Mr. Gill abstained, and that, Mr. Clawson, you'll prepare the Order.

MR. CLAWSON: I will. Thank you very much.

CHAIRMAN JOHNSON: Okay. Thank you. Let's take a ten-minute break until 10:40. Then we'll resume with Agenda Item No. 8.

(The matter was concluded at 10:29 a.m.)

CERTIFICATE

State of Utah)
ss.
County of Salt Lake)

I, Michelle Mallonee, a Registered Professional Reporter and Notary Public in and for the State of Utah, do hereby certify:

That the proceedings of said matter was reported by me in stenotype and thereafter transcribed into typewritten form;

That the same constitutes a true and correct transcription of said proceedings so taken and transcribed;

I further certify that I am not of kin or otherwise associated with any of the parties of said cause of action, and that I am not interested in the event thereof.

Michelle Mallonee, RPR, CSR